United States
Environmental Protection
Agency

Cleanup of Lead, Arsenic Began This Month

Bautsch-Gray Mine Site
Jo Daviess County, Illinois — September 2010

You are invited

EPA will be hosting two open house sessions to explain the investigation and cleanup of the former mine site. At the open houses, EPA and Illinois EPA staff will be available to speak one-on-one with community members. We hope you will be able to attend one of the sessions.

Date: Wednesday, Oct. 6

Times: noon - 2 p.m. and
6 p.m. - 8 p.m.

Place: Rice Township
Maintenance Facility
3260 S. Rocky Hill Road
Galena

For more information, or for special accommodations at the open houses, contact: **Cheryl Allen**, EPA Community Involvement Coordinator, 800-621-8431, Ext. 36196, weekdays, 8:30 a.m. - 4:30 p.m., allen.cheryl@epa.gov.

Information repository

You may review site documents at:

Galena Public Library
601 S. Bench St.
Galena

Check out these Web sites:

www.epa.gov/region5/sites/bautsch

www.epaosc.org/bautsch-graymine

www.atsdr.cdc.gov/tfacts2.pdf

www.atsdr.cdc.gov/tfacts13.pdf

Tailings on the Bautsch-Gray Mine property.

A cleanup of lead and arsenic contamination has begun at the Bautsch-Gray Mine site on Blackjack Road, about four miles south of Galena, Ill. U.S. Environmental Protection Agency is conducting the cleanup to remove tailings, or waste from mining operations.

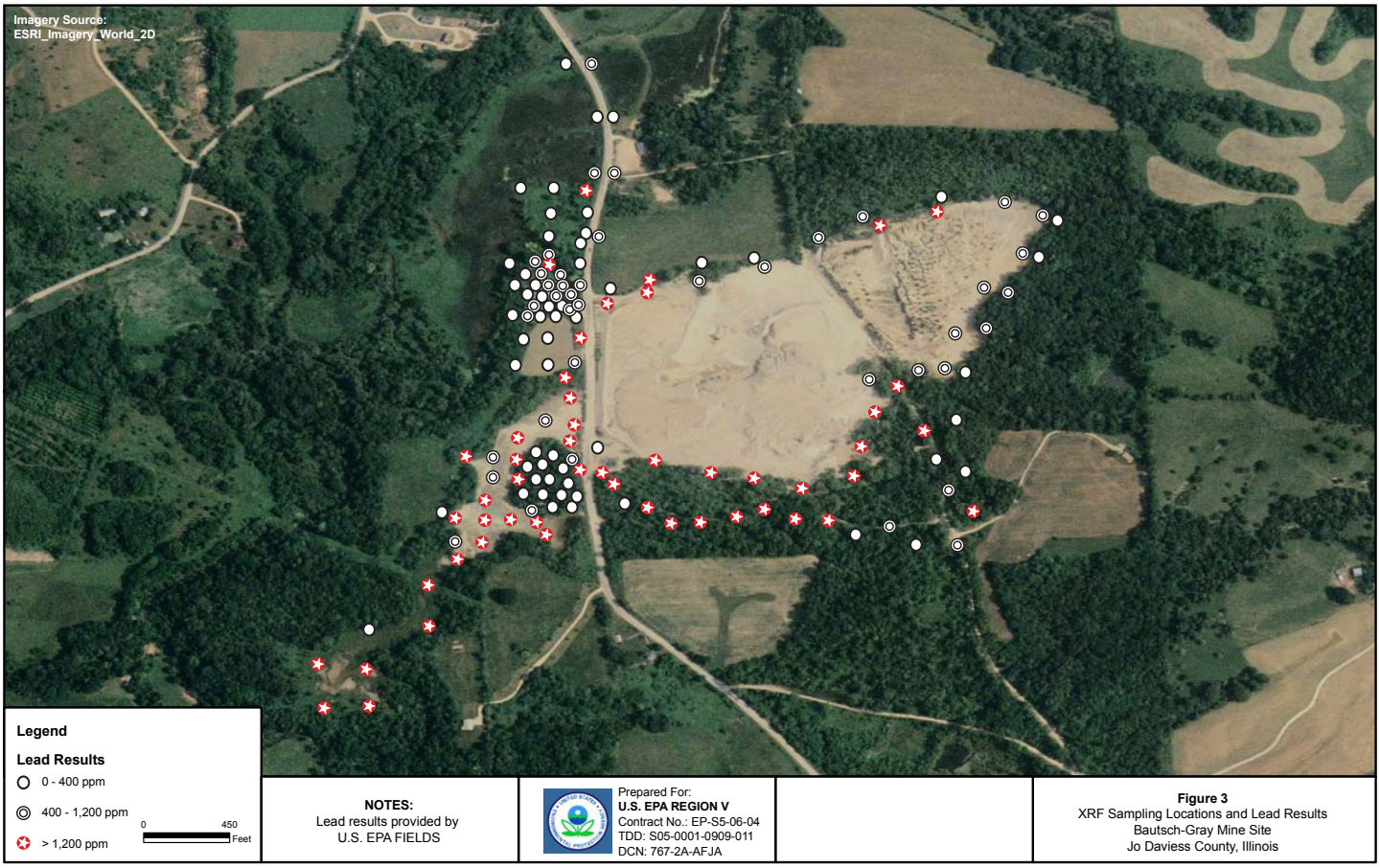
The cleanup will involve:

- Removing contaminated soil, particularly on residential property near the site.
- Reconfiguring the slope of the berm on the property to reduce the runoff from rain and snowmelt.
- Planting vegetation on the berm around the site to keep the tailings and runoff from moving off of the property.
- Diverting storm water around the site.
- Installing ponds, called sedimentation ponds, on the site to hold water runoff.

The site is an old lead and zinc mine that operated from the early 1900s until 1975. Illinois EPA requested help last fall from the EPA Emergency Response Program to address contamination from mine tailings that has moved off the site toward area residences.

Tailings generally contain the remains of the mineral being mined, as well as any chemicals used to remove the minerals.

Map of Soil Sampling Results



Site assessment

In March, EPA completed a study known as a site assessment to determine the extent of contamination at and around the site, and to evaluate any potential health threats.

During the assessment, EPA:

- Observed conditions on and around the property, and took photographs to document the locations of the mine tailings.
- Took soil samples from 150 locations on the former mine site, the residential property next to the site, along Blackjack Road and from a ravine where tailings from the site have been found. Some samples were taken from the soil and some from the tailings.
- Sampled residential wells at two locations.
- Took samples from a shallow pool of water on the mine property and from a marshy area near the site.

The results of EPA's site observation led to several determinations:

- The 55-acre site is abandoned and has very little vegetation.
- The tailings slope toward Blackjack Road.
- An access road leading to the site is gated and the site is partially fenced.
- A large drainage ditch running under Blackjack Road directs water and waste onto a marshland located on a residential property across Blackjack Road.
- The site slopes toward Smallpox Creek, which also receives water from the marshland.
- Residential properties are located west of the site across Blackjack Road.
- Mine tailings that have moved from the site are affecting residential properties. The lawn and vegetation on one property is distressed.

Sampling results

EPA's soil, surface water and residential well water sampling had these results:

- Lead was found in all soil samples taken in and around the mine tailings property, on the residential properties, in the ravine and along Blackjack Road. (See Map of Soil Sampling locations, Page 2.)
- The lead levels in the soil and mine tailings samples ranged from 23 parts per million to 9,577 ppm.
- Lead was found in soil samples at levels above 400 ppm* at many locations and above 1,200 ppm** in some locations.
- Arsenic was found in soil samples taken at some of the locations at levels above 25 ppm.***
- Lead was detected in one residential well sample above drinking water standards.
- Elevated levels of metals were detected in one surface water sample taken from the ravine area and one sample taken from the former mine property.

Potential health risks

People could be exposed to contaminants through the soil on the tailings pile, on the residential property, in the ravine west of Blackjack Road as well as along Blackjack Road. They could also be exposed to lead in drinking water from residential wells that have levels of lead above the drinking water standard.

While access to the former mine site by car is limited, it is still possible to walk onto the property, and EPA found evidence that this is happening. People who do this can be exposed to the contamination on the mine property. They could inhale dust from the tailings when walking on the mine property. Wind or a vehicle driving along Blackjack Road could also blow the fine tailings particles around, allowing them to be inhaled.

Lead and arsenic cleanup levels

*EPA's cleanup goal is to reduce the levels of lead in residential soil to 400 ppm or less.

**1,200 ppm of lead is the level that triggers a "time critical removal" by EPA.

***EPA's and Agency for Toxic Substances and Disease Registry's, cleanup goal for arsenic in residential soil is 25 ppm or less.

Potential environmental risks

Deer have been seen on the site, and there is evidence other animals have also been there. Wildlife could be exposed to the lead and arsenic through the tailings dust and by drinking the contaminated surface water. According to Illinois Department of Natural Resources, many endangered, threatened or rare species in Jo Daviess County can be found in the area, including fish, birds, mammals and plants.

Site background

The Bautsch-Gray Mine was an operational lead and zinc mine. Since it closed in 1975, tailings from the mine property have continued to erode and move toward residential properties, wetlands and fisheries. In 2000 and 2001, Illinois EPA assessed the site and confirmed that waste piles at the mine property contained elevated levels of lead, arsenic and other heavy metals. Additional investigations showed that nearby creeks and drainage ditches had been affected by contaminants that moved from a large mine tailings pile on the mine property. In addition, one residential drinking water well was found to have been contaminated by the mine tailings.

During a storm in August 2009, heavy rain carried tailings from the main waste pile on the mine property across Blackjack Road onto residential property. According to the Jo Daviess County Highway Department, this has been a problem in previous rainy seasons.

On Aug. 24, 2009, Illinois EPA took samples on and around the site and the residential property and found high levels of lead in soil samples from both places. That prompted the state's request for federal assistance.

For more information

For more information about the site, you may contact:

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